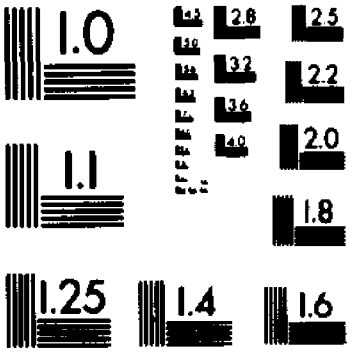

Goodfield, Helen Marjorie

PREPARTUM AND POSTPARTUM MOODS OF BREAST FEEDING AND BOTTLE FEEDING MOTHERS

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PREPARTUM AND POSTPARTUM MOODS OF BREAST FEEDING AND BOTTLE FEEDING MOTHERS

by

HELEN M. GOODFIELD

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Abstract

PREPARTUM AND POSTPARTUM MOODS OF BREAST FEEDING AND BOTTLE FEEDING MOTHERS

by

Helen M. Goodfield

Advisor: Professor Florence L. Denmark

This study attempted to compare the effects of breast feeding and bottle feeding on maternal mood, up to the third postpartum month. The postpartum has typically been regarded as a period during which mothers often feel anxious and depressed. However, breast feeding has recently been recognized as physically and emotionally pleasurable for mothers. It was thus hypothesized that breast feeding mothers would manifest more positive postpartum mood levels than bottle feeding mothers.

Fifty-nine primpaparas between 19 and 48 years of age were recruited from Duke University Medical Center's Department of Obstetrics and several other large practices. Respondents completed eight of Wessman and Ricks' (1966) Personal Feeling Scales for seven consecutive evenings, during three data collection periods: the last trimester of pregnancy, baby's age two weeks, and baby's age three months. In addition, a questionnaire was completed once during each period.

Although breast feeders did appear to find motherhood more enjoyable, they failed to score higher on the Personal Feeling Scales. Breast feeders remaining at home with the baby manifested greater fulfillment than those who returned to work, whereas bottle feeders appeared equally fulfilled whether home or working. Breast feeders manifested greater mood variability than bottle feeders at baby's age three months, but not at baby's age two weeks. Younger mothers manifested higher mood levels and greater variability than older mothers, and the amount of help mothers received with housework and/or baby was unrelated to mood level.

A surprising finding was that of negative correlations between mood levels and level of education (most pervasive at baby's age two weeks). The basis of the better educated mothers' lower mood levels may have been the discrepancy between their societally prescribed self-expectations and the self concept they experienced vis-à-vis the daily routine of motherhood.

It is suggested that the positive effects of breast feeding on mood were counteracted partially by the hormonal states and situational stresses of lactation, and (as the level of education was higher in the breast feeding group) partially by the higher self-expectations of the breast feeding mothers.

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Background

Both popularly and in the professional literature, the postpartum period has typically been viewed as a time of emotional instability and distress. Until very recently, studies of postpartum mood have generally been focused on clinical populations, and relatively little attention has been paid to normal reactions to motherhood (Leifer, 1977). The research on this topic presents a confusing variety of populations and time factors using heterogeneous criteria and measures. The symptomologies and syndromes described range from lability of mood to mild clinical depression. These factors combine to produce a lack of consensus in both the reported incidence of "postpartum blues" and the causes to which it is attributed. According to Yalom, Lunde, Moos and Hamburg (1968), the literature presents a range of estimates of from 5% to 80% in the rate of incidence of the "postpartum blues" syndrome.

It is important to emphasize that, by definition, the postpartum blues syndrome is not to be confused with postpartum depressive psychosis. In fact, as Yalom et al. (1968) point out, whether there is any correlation between the postpartum blues syndrome and postpartum depressive psychosis remains unclear.

Although research on normal postpartum mood has yielded discrepant findings, there is general agreement that pregnancy and the early weeks of motherhood are stressful periods. Theoretically, pregnancy and childbirth are regarded as stages which require considerable adaptation. In a review article on "Psychological Adjustment to Motherhood", Denmark (1979) cites the following negative developments as some of the documented stresses characteristic of these periods: Discomforts of preganancy; fear of maternal or fetal death or fetal deformity; discrepancy between the societally generated high expectations about motherhood, and the actual experience; loss of personal freedom and privacy; boredom and fatigue; guilt over occasional feelings of anger and resentment; insufficient preparation for the degree of responsibility involved in the maternal role; and feelings of ignorance and inadequacy as new mothers, with resultant feelings of anxiety.

Leifer (1977) conducted a comprehensive exploratory investigation covering the changes relevant to pregnancy and motherhood. She followed 19 normal, middle class primagravidas from early pregnancy through baby's age seven months. Subjects were interviewed during each trimester of pregnancy, and at the third day and the second month postpartum. At baby's age seven months, respondents completed a follow-up questionnaire.

Reactions to motherhood were assessed at baby's age two months by analyzing mood tone, stress in adaptation and affective attachment to the baby (interview data); perceived life stage; self-concept; satisfaction with nursing; and perception of motherhood, obtained from the Reactions to Motherhood scale. On this instrument, respondents were asked to rate ten pairs of bipolar adjectives (describing reactions to motherhood) on a six-point scale.

Leifer found that the majority of respondents experienced parenthood as a greater crisis period than that of pregnancy. For most of the mothers, the "moderate to extreme negative affect" (p. 75) experienced during the early postpartum (characterized by anxiety, depression and increased emotional lability) shifted to feelings of boredom and "emotional constriction" at baby's age two months. At baby's age seven months, a majority still reflected predominantly negative mood tones.

In addition, Leifer found that women who bottle fed their infants regarded feedings as "emotionally neutral or boring tasks", whereas breast feeding women felt that the nursing fostered "a sense of emotional union, an intensity that was not matched in other interactions with the baby" (p. 80). Berg-Cross, Berg-Cross and McGeehan (1979) report that their bottle feeding mothers regarded feeding as "a noneventful experience" (p. 352).

Breast Feeding and Postpartum Mood

An emerging trend in the psychological literature portrays lactation as a dimension of women's psychosexual functioning, and, as such, a source of sexual gratification (Newton and Newton, 1967; Newton, 1971a; Newton, 1971b; Newton and Newton, 1972; Newton, 1973; Seiden, 1976; Rossi, 1973; Rossi, 1977). Breast feeding has been enthusiastically endorsed as "wonderful" (Guthrie and Guthrie, 1966), and as "exceptionally meaningful" or "enjoyable" (Kenny, 1976) by successful nursing mothers. Newton (1973) points out that breast feeding had to be pleasurable to insure continuation of the species, and that "operant conditioning, reinforced by sexual pleasure, may be the biological foundation on which patterns of family life are built" (Newton, 1971b, p. 71).

While all infants can dispense positive reinforcement to their mothers in various ways (e.g., smiling, "cooing"), breast feeding infants can provide additional modes of reinforcement. During breast feeding, for example, the mother experiences the sensation of her infant's suckling, and often tactile stimulation of the breast; and she may derive satisfaction from feeling that she is the sole provider of her infant's satisfaction during feedings. Too, with breast feeding, there is the probability of greater frequency and duration of feeding, and thus, of the additional reinforcements idiosyncratic

to breast feeding.

Another difference between breast feeders and bottle feeders is that the hormones of lactation appear to make breast feeding women more responsive to their infants (Ainsworth, 1973; Newton, 1961). Newton, Peeler and Rawlins (1968) found that 74% of bottle feeding mothers "never" slept or rested with the baby in bed, compared to 29% of nursing mothers. Data from mouse pairs demonstrated a heightened drive for proximity with the young in lactating mice, compared to mice in whom lactation had been inhibited.

The emotional and physical pleasures of breast feeding suggest that it might be related to positive mood levels in the nursing mother. However, the hormonal state of the lactating woman is presented controversially in the literature. On the one hand, prolactin is reported to have a tranquilizing effect (Newton, 1961; Sugarman, 1977; Brewster, 1979). On the other hand, the lactating woman's combination of high levels of prolactin with low levels of estrogen (Alder and Cox, 1983; Kayner and Zagar, 1983) may cause depressive symptoms (Mastrogiacomo, Fava, Fava, Kellner, Grismondi, and Cetera, 1982-83).

Low levels of estrogen prevail during premenstrual days and menstrual days, and there is evidence that normal women may suffer from depression, anxiety or

irritability during these times (Golub, 1976; Wessman and Ricks, 1966; May, 1976). May (1976) had 30 young adult women complete the Elation vs. Depression scale of the Personal Feeling Scales (Wessman and Ricks, 1966) through two menstrual cycles. He found that 50% showed increased depression premenstrually, and another 40% were depressed during menstruation.

Wessman and Ricks (1966) had 25 college women complete eleven of the Personal Feeling Scales for six weeks. They found that, of the 19 women who reported menstrual periods, 14 scored lower than their general mean on Elation vs. Depression two days before menstruation, and 11 of the 19 scored lower than their general mean on the first menstrual day.

Kayner and Zagar (1983) posit that the low levels of estrogen characteristic of fully lactating women underlie the low libido and vaginal dryness often experienced during the breast feeding period. They found that, of 121 respondents to a questionnaire study, 62.6% of nursing and amenorrheic mothers reported less or no sexual desire, compared to the pre-pregnancy period, and 32.2% volunteered (without being asked specifically) that they experienced vaginal dryness during sexual relations.

Another complication for the study of the effects of breast feeding on maternal mood is that women who choose to breast feed differ from those who prefer to bottle

feed on a number of personality variables before they actually begin to breast feed. They tend to be less repressed psychosexually (Adams, 1959; Brown, Winston, Leiberman, and Pleshette, 1960; Newton and Newton, 1967; Newton and Newton, 1972), and there is evidence that they are higher sensation seekers (Berg-Cross, Berg-Cross, and McGeehan, 1979). They appear to be more affectionately nurturant (Brown et al., 1960), and more maternal (Potter and Klein, 1957; Adams, 1959). Potter and Klein (1957) report that the history of mothers who accepted breast feeding indicated greater enjoyment of doll play and caring for babies, as youngsters.

To date, there has been relatively little research on mode of feeding and maternal mood, and the findings of this research are discrepant. In addition, in most studies done, little attention is paid to whether formula and/or solids are given to the baby during the breast feeding period being observed (Newton, 1971a). Newton points out that formula or food supplements tend to cause rejection of the breast by the infant, which results in engorgement, pain, and early weaning.

Research on breast feeding and maternal mood has produced the following discrepant findings: Cone (1971) found that breast feeders became depressed on the fourth and fifth postpartum day, whereas bottle feeders did so any time between the third and eighth day. On the other

hand, Kendell, McGuire, Connor and Cox (1981) found that both breast feeders and bottle feeders peaked at five days, on depression, tears, and lability of mood. Alder and Cox (1983) found that total breast feeders had a higher incidence of depression than partial breast feeders, and Berg-Cross, Berg-Cross and McGeehan (1979) report that bottle feeders experienced more depression than breast feeders.

In a paper on maternal mood and mother-child attachment behavior, Looker and Wessman (1983) report that breast feeding was related to greater happiness and peak emotional highs, as measured by the Elation vs. Depression scale of the Personal Feeling Scales (Wessman and Ricks, 1966).

The Measurement of Mood

Although thirty years ago little research had been done on the measurement of mood in normal populations, since that time a comprehensive body of findings from diverse research orientations has accrued. Data from these varying perspectives have converged into basic agreement about the role of moods in human existence. Few would dispute the recognition that moods affect the way we think and behave, and that they are reciprocally affected by our thoughts and actions.

Wessman (1979, p. 74) writes:

> It is becoming increasingly clear that differentiated affect plays a critical part in initiating, maintaining, and regulating human action. Personal feelings and emotions instigate, facilitate, sustain, and modify active engagement in an organism oriented toward a complex world that is in some measure its own creation.

Varying theoretical approaches and assumptions have generated a variety of mood measurement instruments. These may differ in the number of affects studied; the number and range of increments (scale points) presented to the respondent; whether words or phrases are used to describe the affects; and whether unipolarity or bipolarity of the affects presented is assumed. Bipolar scales assume the end points of a mood dimension are mutually exclusive (e.g., "Impulse vs. Self Restraint", from the Personal Feeling Scales [Wessman and Ricks, 1966]), whereas unipolar scales allow the simultaneous recording of apparently contradictory moods (e.g., "tears of joy").

The mood scales that seemed best suited to reflection of the mood levels and variations of the normal women in this study, who were for the first time experiencing the emotional, hormonal, and situational chaos

of pregnancy and motherhood, were the Personal Feeling Scales (Wessman and Ricks, 1966). This set of 16 bipolar scales, each with a ten-point progression of descriptive phrases from positive to negative, promised to be sensitive to subtle changes in feeling, without hampering the expression of fleeting extremes.

The average rating of the Elation vs. Depression scale has been demonstrated to be a valid measure of general happiness or hedonic level (Wessman and Ricks, 1966; Wessman, 1979). Wessman and Ricks had 25 Radcliffe women and 18 Harvard men complete the Personal Feeling Scales for a period of six weeks each. In the sample of women, Elation vs. Depression correlated .50 or more with the other scales. That is, women with positive mood levels on Elation vs. Depression tended to be positive on the other scales as well. Comparing the Elation vs. Depression levels of the men with rankings of happiness-unhappiness by staff psychologists, in an intensive three-year personality assessment study, supported a high degree of validity for the Elation vs. Depression measures.

The Elation vs. Depression scale has been found to be related to a variety of personality characteristics (e.g., overall adjustment [Wessman and Ricks, 1966], choice of defense mechanisms [Clum and Clum, 1973], and self esteem [Wessman, Ricks and Tyl, 1960]); situational

factors (e.g., race and depression [Carter, 1972], premenstrual and menstrual tension [Wessman and Ricks, 1966; May, 1976]); and behaviors (e.g., therapeutic facilitativeness [Gurman, 1973], and frequency of extrapunitive and intrapunitive responses [Wessman, Ricks and Tyl, 1960]).

In addition to mood level, two measures of mood variability are used with the Personal Feeling Scales. Variability from day to day is measured by the standard deviation of the average rating of the scale, and within-day variability is measured by the difference between the high and low rating for the day. Between-day variability and within-day variability have been found to be moderately correlated and independent of mood level (Wessman and Ricks, 1966; Wessman, 1979).

In Wessman and Ricks' (1966) sample of Radcliffe women, the variable subjects seemed less repressed and more spontaneous than the stable subjects. They were characterized as more likeable, more involved with others, and "still open to the disruptive and rewarding influences of both inner and outer stimulation" (p. 241).

In contrast, the stable subjects were described as more repressed, constricted, and aloof, "with perhaps a good deal of inner work struggling toward control" (p. 241).

The following eight of the Personal Feeling Scales were selected for use in the present research, because they appeared to be particularly relevant to issues in preganancy and early motherhood:

1. Fullness vs. Emptiness of Life (how emotionally satisfying, abundant or empty your life felt today).
2. Personal Freedom vs. External Constraint (how much you felt you were free or not free to do as you wanted).
3. Harmony vs. Anger (how well you got along with, or how angry you felt toward, other people).
4. Own Sociability vs. Withdrawal (how socially outgoing or withdrawn you felt today).
5. Tranquillity vs. Anxiety (how calm or troubled you felt).
6. Self-Confidence vs. Feeling of Inadequacy (how self-assured and adequate, or helpless and inadequate, you felt).
7. Energy vs. Fatigue (how energetic, or tired and weary, you felt).
8. Elation vs. Depression (how elated or depressed, happy or unhappy you felt today).

Hypotheses

Hypothesis I

In consideration of the physical and emotional pleasures derived from breast feeding, it was hypothesized that breast feeders would score higher than bottle feeders on the average rating of the Elation vs. Depression scale of the Personal Feeling Scales.

Hypothesis II

In consideration of the personality characteristics of women who were variable in the Wessman and Ricks (1966) study, it was hypothesized that women who elected to breast feed would reflect greater variability on the Personal Feeling Scales than women who elected to bottle feed.

Hypothesis IIIa

In consideration of the greater fulfillment derived from breast feeding, it was hypothesized that breast feeders who remained at home with the baby would score higher than breast feeders who returned to work, on the average rating of the Fullness vs. Emptiness of Life

scale of the Personal Feeling Scales.

Hypothesis IIIb

In consideration of Leifer's (1977) finding that bottle feeders regarded a large portion of infant care (i.e., feeding) as "neutral and boring", it was hypothesized that bottle feeders who remained at home with the baby would score lower than bottle feeders who returned to work, on the average rating of the Fullness vs. Emptiness of Life scale of the Personal Feeling Scales.

Hypothesis IV

In consideration of the demands placed upon young mothers, it was hypothesized that those who had more help with child care and general help with household responsibilities would score higher on the average rating of the Elation vs. Depression scale of the Personal Feeling Scales.

Method

Recruitment of Participants

Respondents for the study were recruited from Duke University Medical Center's Department of Obstetrics and Gynecology, and four large obstetrical practices in the surrounding area.

In all facilities, a liaison person (LP) was appointed by the head physician or administrator. Every obstetrical patient who was expecting a first child was asked by the LP if she might care to participate in a study of first-time motherhood. Flyers describing the research were offered to interested women (see Appendix 1).

Any patient indicating an interest was told that if she would leave her name and telephone number with the LP, she would be contacted by the principal investigator (PI). She was told that, during this telephone contact, she would be fully informed about what participants in the research would be asked to do, and that she would have an opportunity to ask any questions she might have. She was reassured that leaving her name with the LP did not constitute an agreement to participate in the research.

During this initial telephone contact, a prospective respondent was told by the PI that, if she agreed to participate, she would be contacted by the PI twice more: Once, when her baby was two weeks old, and once again, when her baby was three months old. These additional telephone contacts were planned in order to insure the continued commitment of respondents, and to remind them that the next set of materials was due.

If a prospective respondent then agreed to participate in the research, she was advised that she could pick up a packet of materials from the LP (usually during her next routine obstetrical visit). Eighty-nine women agreed to participate.

Mood Scales and Questionnaires

Each packet of materials contained three postage-paid envelopes addressed to the PI, and a cover sheet of general directions (see Appendix 2). Each of the envelopes contained: (1) Eight scales selected from the Wessman and Ricks (1966) Personal Feeling Scales (see Appendix 3), with seven Daily Record answer sheets (see Appendix 4) for completion of these scales for one week; and (2) a questionnaire of multiple choice items related to the period during which it was to be filled out (Prepartum [see Appendix 5], Postpartum I [see Appendix 6], and Postpartum II [see Appendix 7]).

The envelope of materials labeled Prepartum was to be completed during a week in the seventh, eighth, or ninth month of pregnancy; the envelope of materials labeled Postpartum I was to be completed during the week beginning at baby's age two weeks; and the envelope of materials labeled Postpartum II was to be completed during the week beginning at baby's age three months.

All materials in each packet of three envelopes were marked with the same identification number, to enable the three data sets for each respondent to be combined without revealing her identity.

Number and Characteristics of Respondents

As of the cut-off date for data analysis, of the original 89 women who had agreed to participate in the research, 71 completed the Prepartum set of materials; the first two sets (Prepartum and Postpartum I) were completed by 59 respondents; and all three sets (Prepartum, Postpartum I, and Postpartum II) were completed by 45 respondents.

Of those respondents who did not complete the study, 14 advised the PI (during a follow-up telephone call) that they had dropped out, for the following reasons: two had ill babies, one found the materials too difficult, one had become too busy, and the remainder had either failed to pick up the materials, or had failed to

send in the Prepartum Questionnaire.

The sample of women that was retained for data analysis included only the 59 respondents who had completed at least the Prepartum and Postpartum I questionnaires, along with the Personal Feeling Scales for these periods. Of these 59 respondents, 52.5% were 19 to 28 years of age, 45.8% were 29 to 38 years of age, and one woman (1.7%) was 39 to 48 years. The infants of the 59 respondents included in the analysis were of normal weight and healthy, at birth.

One respondent had only some high school; 10.2% had high school diplomas; 32.2% had some college; 25.4% had college degrees; 11.8% had some graduate education; 13.6% had a graduate degree; and 5.1% had done at least some postgraduate work. Thus, 88.1% of the respondents had had at least some college education, 55.9% were at least college graduates, and 30.5% had had at least some graduate education. This created an unforeseen difficulty for the research. That is, apparently due to the correlation between higher level of education and choice of breast feeding (Newton and Newton, 1972), only 17 of the respondents stated that they intended to bottle feed, and only 14 of the 59 respondents at baby's age two weeks were bottle feeding their infants (compared to 32 respondents who were breast feeding with no supplements, during this period).

The imbalance between numbers of respondents in the two designated feeding groups became evident fairly early during the data collection period, and efforts were made to locate a source of additional bottle feeders. The search was not successful, however, as it ultimately led to Orange County Comprehensive Health Services, which provides medical care for indigent patients. This population included a number of unwed teenagers, and the level of education was extremely low for the majority of patients. As the administrator felt it was unlikely that the patients could understand the materials, this group of women was not included in the sample.

Although the original research design proposed to include only those respondents with at least some college, this criterion would have eliminated 28.6% (four out of fourteen) of the already sparse group of bottle feeders at baby's age two weeks. Thus, the decision was made to retain all of the bottle feeders in the data analysis at baby's age two weeks.

At baby's age three months, four of the twelve respondents who were bottle feeding had been breast feeding at baby's age two weeks. Since it was impossible to determine when these women had switched to bottle feeding, they were not included in the group of bottle feeders for the last data analysis.

Data Analysis

To attain a broader perspective of the results, three types of data analysis were performed. They were: (1) Analysis of data from the Prepartum, Postpartum I, and Postpartum II questionnaires; (2) Analysis of numerical data from the Personal Feeling Scales for each of the seven-day periods (prepartum, baby's age two weeks, and baby's age three months); and (3) Content analysis of additional comments written on the Personal Feeling Scales answer sheets during each of the three seven-day periods.

In evaluating data derived from the Daily Record sheets of the Personal Feeling Scales, two measures were calculated for each of the seven-day periods. These are: (1) Mean scores: a group mean of the mean of each respondent's high, average, and low ratings for each scale. The average mean score was regarded as a measure of overall mood level (Wessman, 1979); (2) Mean daily range: a group mean of each respondent's mean daily range (the difference between the daily high and low ratings). The mean daily range was regarded as a measure of within-day variability of mood (Wessman, 1979).[1] In addition,

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[1]The standard deviation is used as a measure of between-day variability on the Personal Feeling Scales (Wessman, 1979), and is found to be moderately correlated with the mean daily range (within-day variability). Between-day variability was not analyzed in this study because it has typically been derived from respondents who complete the PFS for six weeks consecutively (as compared to only one week in this study).

a mean change score was calculated, representing each respondent's gain or loss from one period to the next (i.e., from prepartum to baby's age two weeks, from baby's age two weeks to baby's age three months, and from prepartum to baby's age three months). The change scores were based on the average ratings of each scale.

When indicated by the results of a full analysis, a clean analysis was performed. The clean analysis included, for each respondent, only those ratings from nights on which she reported no stressful events and that her health was at least "good" (see Appendix 4, items D and A). This was regarded as an attempt to obtain mood data uncontaminated by the effects of stress or ill health.

Unobtrusive Check

Although most respondents appeared concerned about completing the Daily Record answer sheets according to instructions, it was admittedly a time consuming task. Thus, the consideration arose that some respondents might have completed all seven Daily Record sheets (per period) during one sitting, to save time. In order to assess the number of Daily Record sets that could have been filled out in this manner, an unobtrusive check was performed. Each respondent's three sets of seven Daily Record sheets were examined, to determine if: (1) the same pen or

pencil was used each night; (2) nightly responses regarding physical health, stressful events, or medicine or alcohol consumed were identical; and (3) no additional (optional) comments were written on the Daily Record sheets. If a set of Daily Record sheets failed to meet all three of these criteria, it was judged as probably having been completed according to instructions (i.e., one sheet per evening).

Three Daily Record sets met the above three criteria. That is, each of these sets was written with the same utensil each night; responses on health, stress, and medicines or alcohol were identical for each night; and there were no additional comments written on the Daily Record sheets. However, in checking these sets further, no obvious patterning of numerical responses was evident in two of them, and in one of these two, a number had been crossed out and changed. Thus, on the basis of the unobtrusive check, it appeared as if most (if not all) respondents had completed one Daily Record sheet each evening, as per instructions.

Results

Personal Feeling Scales

Month of pregnancy. With the exception of one respondent in the seventh month of pregnancy, expectant mothers in the study fell into two groups: Eighth month (N = 23) and ninth month (N = 33). There were no differences between these two groups in mood level or within-day variability on any of the scales.

All respondents. During the prepartum period, the mean average score on Elation vs. Depression for all respondents was 5.51 (midway between "feeling pretty good, OK" and "feeling very good and cheerful"), with a minimum average score of 4.00 ("feeling a little bit low. Just so-so") and a maximum average score of 7.00 ("elated and in high spirits"). The mean daily range (within-day variability) during this period was 2.50 points, with a minimum mean daily range of .43 points and a maximum of 5.29 points.

At baby's age two weeks, the mean average score on Elation vs. Depression for all respondents was 5.66 (between "feeling pretty good, OK" and "feeling very good and cheerful"), with minimum average score of 4.29 (between "feeling a little bit low. Just so-so", and "Feel-

ing pretty good, OK"), and maximum average score of 7.57 (between "Elated and in high spirits" and "Very elated and in very high spirits. Tremendous delight and buoyancy"). The mean daily range during this period was 2.44 points, with a minimum mean daily range of .00 points and a maximum of 5.29 points.

At baby's age three months, the mean average score on Elation vs. Depression for all respondents was 5.91, with a minimum average score of 4.57 and a maximum average score of 7.86. The mean daily range during this period was 2.34 points, with a minimum daily range of .00 points and a maximum of 4.86 points.

The mean average scores and mean daily ranges on Elation vs. Depression during the prepartum period, at baby's age two weeks, and at baby's age three months appear about the same (see Table 1).

A substantive indicator of change between these periods is the mean change score (the mean of each respondent's mean average gain or loss, from one period to the next). The mean change scores for all respondents from prepartum to baby's age two weeks reflected gains on Elation vs. Depression, Energy vs. Fatigue, and Fullness vs. Emptiness of Life, and a steep loss on Personal Freedom vs. External Constraint. The mean change score for all respondents from baby's age two weeks to baby's age three months reflected significant or nearly signi-

ficant gains on all scales. The mean change score for all respondents from the prepartum period to baby's age three months reflected significant or nearly significant gains on all scales, with the exception of Confidence vs. Feeling of Inadequacy (no change), and Personal Freedom vs. External Constraint, which reflected a loss (see Table 2).

Breast feeders and bottle feeders at baby's age two weeks. At baby's age two weeks, there is no significant difference between the high, average or low mean scores, or the mean daily ranges, of the 32 breast feeders and 14 bottle feeders on the Elation vs. Depression scale. Thus Hypothesis I and Hypothesis II were both unsupported during this period.

Bottle feeders' mean scores were higher on the high rating and the average rating of Personal Freedom vs. External Constraint, and the average rating and the low rating of Own Sociability vs. Withdrawal. Breast feeders scored significantly lower than bottle feeders on the low rating of Energy vs. Fatigue, even though they were not getting any less sleep (see Table 3).

A clean analysis was performed on these data, including only scores from nights on which a respondent reported that there had been no stressful events that day, and that her health had been at least "good" (see Appendix 4, items D and A). The clean analysis of breast

feeders vs. bottle feeders at baby's age two weeks reflected no noteworthy differences from the general analysis.

Although breast feeders scored slightly higher than bottle feeders on the mean daily range of Harmony vs. Anger, the feeding groups did not differ on within-day variability during this period.

The mean change score (based on average ratings) from prepartum to baby's age two weeks reflects a greater loss on Personal Freedom vs. External Constraint for the breast feeders than the bottle feeders ($P = .04$). In fact, it appears that the breast feeders' loss on this item may represent the loss of personal freedom in the total sample during this period, as breast feeders show a loss of -.84, compared to the bottle feeders' loss of -.05.

There are no other differences between feeding groups on mean change scores between these periods.

Breast feeders and bottle feeders at baby's age three months. Aside from the finding that the 14 women who were breast feeding at this time continued to score lower than the 8 bottle feeders on the low rating of Energy vs. Fatigue ($P = .07$), and scored somewhat lower on the low rating of Harmony vs. Anger ($P = .09$), there are no differences between feeding groups on any of the mean score ratings during this period.

In a clean analysis of the data for this period, breast feeders scored somewhat lower on the low ratings of Harmony vs. Anger and Tranquillity vs. Anxiety (P = .07 for both scales), and somewhat higher on the high ratings of Confidence vs. Feeling of Inadequacy, and Energy vs. Fatigue (P = .09 for both scales).

Breast feeders reflected greater within-day variability during this period. These differences neared or reached significance on Fullness vs. Emptiness of Life, Harmony vs. Anger, Tranquillity vs. Anxiety, Confidence vs. Feeling of Inadequacy, and Energy vs. Fatigue (see Table 4).

A clean analysis was performed on the mean daily range differences between breast feeders and bottle feeders during this period. An interesting result of the clean analysis is that the mean daily range of "clean" bottle feeders reflects less variability than that of all bottle feeders, while the mean daily range of "clean" breast feeders reflects variability greater than or equal to that of all breast feeders (see Table 4). These changes for breast feeders and bottle feeders, in the clean analysis at baby's age three months, appreciably boost the significance of the differences between these feeding groups on within-day variability.

The mean change scores, from baby's age two weeks to baby's age three months, and from prepartum to baby's age

three months, do not differ between breast feeders and bottle feeders.

Mood level upon returning to work. The hypothesis that the mood levels of breast feeders who remained at home with the baby would be higher than those of breast feeders who returned to work at baby's age three months was supported. The nine breast feeders who remained at home scored higher than the five breast feeders who did not, on three ratings of Fullness vs. Emptiness of Life, Tranquillity vs. Anxiety, Energy vs. Fatigue, and Personal Freedom vs. External Constraint, on the average and low ratings of Confidence vs. Feeling of Inadequacy, and on the low rating of Elation vs. Depression (see Table 5).

There were no differences on any of the scales between the six bottle feeders who returned to work at baby's age three months and the two bottle feeders who remained at home. Therefore the hypothesis that working bottle feeders would score higher than non-working bottle feeders, on Fullness vs. Emptiness of Life, was not supported.

Effects upon mood of help with housework and/or baby. Both Pearson product moment correlations and multiple regression analysis failed to show any support for the hypothesis that the amount of help with housework and/or baby would be positively related to mood level.

Effects of age upon mood. Ignoring other factors, the age of the mothers in this sample generated differences in mood level and variability in Personal Feeling Scales data at baby's age two weeks. Of the 59 respondents during this period, 31 were between 19 and 28 years of age, 27 were between 29 and 38 years of age, and one woman was between 39 and 48 years of age. (This respondent was excluded from the analysis by age).

The younger mothers scored higher than the older mothers on the high ratings of all scales, and the average ratings of half of the scales. The differences were significant on the high ratings of Fullness vs. Emptiness of Life, Confidence vs. Feeling of Inadequacy, and Personal Freedom vs. External Constraint, and the high and average ratings of Own Sociability vs. Withdrawal, Tranquillity vs. Anxiety, Energy vs. Fatigue, and Elation vs. Depression (see Table 6).

The younger mothers were more variable, as well, and these differences reached significance on Fullness vs. Emptiness of Life, Harmony vs. Anger, Tranquillity vs. Anxiety, and Own Sociability vs. Withdrawal. The probability of the difference on Elation vs. Depression was .06 (see Table 7).

Effects of level of education upon mood. An unexpected and puzzling finding was that of pervasive negative correlations between level of education and many of

the mood scale ratings (see Table 8). This finding was pursued in T-Tests of the differences between the mood means of respondents with a maximum of "some college", and respondents who were at least college graduates (see Table 9).

During the prepartum, the better educated women scored lower on the high ratings of Fullness vs. Emptiness of Life, Tranquillity vs. Anxiety, Confidence vs. Feeling of Inadequacy, Energy vs. Fatigue, and Own Sociability vs. Withdrawal. At baby's age two weeks, the better educated women scored lower on all ratings of Tranquillity vs. Anxiety, Confidence vs. Feeling of Inadequacy, Energy vs. Fatigue, and Own Sociability vs. Withdrawal; on the average and high ratings of Fullness vs. Emptiness of Life, Elation vs. Depression, and Personal Freedom vs. External Constraint; and the high rating of Harmony vs. Anger. At baby's age three months, the better educated women scored lower on all ratings of Personal Freedom vs. External Constraint and Energy vs. Fatigue; on the average and high ratings of Fullness vs. Emptiness of Life, and Tranquillity vs. Anxiety; and on the high rating of Confidence vs. Feeling of Inadequacy, and Own Sociability vs. Withdrawal.

At prepartum, the mean daily range scores indicated that the better educated women were less variable on Fullness vs. Emptiness of Life, Harmony vs. Anger, Tran-

quillity vs. Anxiety, Confidence vs. Feeling of Inadequacy, and Personal Freedom vs. External Constraint. At baby's age two weeks, the better educated women were less variable on Personal Freedom vs. External Constraint. And at baby's age three months, there were no differences in within-day variability between better educated and less educated women.

Relationship of level of education to age and feeding method. Of the 27 older women, 70.4% were better educated, compared to 45.2% of the 31 younger women. Of the 32 breast feeding respondents (at baby's age two weeks), 71.1% were better educated, compared to 21.4% of the 14 bottle feeding respondents.

An analysis of variance was performed, assessing the relative effects (at baby's age two weeks) of age, feeding method, level of education, amount of help with the baby, and amount of help with housework, upon the mean average ratings of the Personal Feeling Scales. This analysis clearly demonstrates that level of education has the strongest effect upon all average mood ratings relative to the other four variables (see Table 10). Thus, it is reasonable to consider that the proportionately higher level of education in the group of older women (relative to younger women) and in the group of breast feeders (relative to bottle feeders) may be a factor in lowering the mood ratings of these groups.

Questionnaire Data

The questionnaires filled out at prepartum, baby's age two weeks, and baby's age three months provided an additional perspective to Personal Feeling Scales data.

The correlation between higher level of education and choice of breast feeding (Newton and Newton, 1972) was replicated in this sample (P = .07, Chi square).

The Potter and Klein (1957) finding that breast feeding women indicated greater enjoyment of doll play as youngsters was not replicated. However, respondents who indicated enthusiasm for doll play as youngsters found their babies somewhat easier to care for at baby's age two weeks (P = .07).

An unexpected and interesting finding was that, at baby's age two weeks, mothers of boys reported a greater gain in maternal feeling (compared to late pregnancy) than mothers of girls (see Appendix 6, question 37). Although this difference was not significant (P = .13), it is of interest because the baby's sex was the only variable to account for any difference in gain in maternal feeling at this time. (Other variables cross-tabulated with gain in maternal feeling were: enjoyment of doll play, enjoyment of baby-sitting, pleasure/displeasure on learning of the pregnancy, and feeding method at baby's age two weeks).

The question, "Which best expresses your evaluation of the experience of motherhood?" (see Appendix 6, question 14) drew none of the negative responses available, at baby's age two weeks or at baby's age three months. "Exceptionally meaningful" was selected by 74.6% of the mothers, and "enjoyable" by 25.4%, at baby's age two weeks. There was no difference in response to this item between breast feeders and bottle feeders at baby's age two weeks, and at baby's age three months, 92.9% of breast feeders and 75% of bottle feeders chose "exceptionally meaningful" (not significant).

At baby's age three months, 42 of the 45 women (93.3%) had resumed sexual relations. This experience differed in several ways for breast and bottle respondents. At least some discomfort was reported by 83.3% of the breast feeders, compared to 50% of the bottle feeders. Lack of lubrication was at least somewhat of a problem for 91.7% of breast feeders, compared to 50% of bottle feeders ($P = .04$). When asked to compare present sexual desire to sexual desire before pregnancy, some respondents reported an increase (breast feeders, 21.4% vs. 12.5% [one] of bottle feeders); some reported a decrease (breast feeders, 71.4% vs. 50% of bottle feeders); and some reported the same level of sexual desire (breast feeders, 7.1% [one] vs. 37.5% of bottle feeders).

During this period, 71.4% of the 14 breast feeders had not had any menstrual period, and 21.4% had had a brief period. Among the 8 bottle feeders, 100% reported a full menstrual period (P = .0001).

At baby's age three months, 75% of bottle feeders and 42.9% of breast feeders were employed outside the home. All eight of the employed bottle feeders worked between 11 and 40+ hours per week. Of the six employed breast feeders, five worked between 11 and 40+ hours a week. Thus, 35.7% of breast feeders worked outside of the home for 11 to 40+ hours per week, compared to 75% of the bottle feeders.

At baby's age two weeks, more bottle feeders than breast feeders were getting 11 to 40+ hours of help with the baby (90% vs. 50%, P = .09), and with the housework (75% vs. 53.5%, not significant).

Content Analysis

The content analysis performed on comments written on the Personal Feeling Scales answer sheets served to add an additional perspective to questionnaire and PFS data. Too, it provided a check on the validity of the self-report items, which may have been compromised by socially desirable responses.

The categories used in the analysis were as follows:

1. Unconditionally positive remarks about the baby or about motherhood. Examples are, "Overall I enjoy spending the day loving my baby" (Breast). "It really is a wonderful experience and I'm sure it grows more wonderful as the baby does" (Bottle). "Many times these two weeks I have looked at my baby and cried tears of joy and happiness" (Breast).
2. Complaints about motherhood or about the baby. Examples are, "It can be exhausting and a huge responsibility for a couple" (Bottle). "I was quite annoyed that all my efforts to pacify her seemed in vain" (Breast).
3. Comments about lack of sleep. Examples are, "I'm up with the baby nursing it about three times a night, so we're both very tired" (Breast). "Having trouble adjusting to sleeping two hours at a time" (Breast).
4. Conflicts between mothering and other responsibilities. Examples are, "I have special worries because I am unsure how to manage (baby's) needs when I will be returning to work in a few weeks" (Breast). "Feeling very torn about work (part-time) and mothering" (Breast).
5. Difficulties with nursing (breast feeders). Examples are, "I was in quite a lot of pain due to

cracked nipples...but determined not to give up breast feeding no matter what..." "Am having trouble with breast feeding due to excessive soreness."

The most striking finding to emerge from the content analysis was that breast feeders made more comments about their babies and about motherhood than bottle feeders.

At baby's age two weeks, there were 14 bottle feeders and 32 breast feeders in the analysis. Of these, 50% of the breast feeders made at least one comment (positive or complaint) about motherhood and/or the baby, compared to only 28.6% of the bottle feeders. Positive comments were made by 37.5% of the breast feeders and 7.1% (one) of the bottle feeders. Complaints were voiced by 25% of the breast feeders and 28.6% of the bottle feeders.

At baby's age three months, this pattern persists. During this period, at least one comment (positive or complaint) was written by 57.1% of the 14 breast feeders and 12.5% of the 8 bottle feeders. Positive comments were written by 50% of the breast feeders and 25% of the bottle feeders, and complaints were voiced by 28.6% of breast feeders and 25% of bottle feeders.

In view of the different educational levels between the two groups, the possibility that breast feeders were just more verbal, in general, prompted an analysis of comments unrelated to motherhood or the baby. Examples

are: "Husband is unemployed and financial situation is shaky at this time" (Bottle). "Cat has lymphosarcoma" (Breast). The groups did not differ on this analysis. It thus appears that breast feeders in this sample have more to say about motherhood and their babies than bottle feeders.

Additional information derived from the content analysis is as follows: At baby's age two weeks, 28.1% of breast feeders complained about lack of sleep, while bottle feeders made no comments about this, and at baby's age three months these complaints were voiced by 42.9% of the breast feeders and only 12.5% (one) of the bottle feeders.

Conflicts between motherhood and other obligations appeared at baby's age two weeks (breast, 9.4% [three respondents], and bottle, none). At baby's age three months, these conflicts were expressed by 28.6% of the breast feeders (four) and 8.3% of the bottle feeders (one).

Three of the breast feeders complained of pain with breast feeding at baby's age two weeks, and one at baby's age three months.

Discussion

Hypothesis I

The hypothesis that breast feeding mothers, because of their greater enjoyment of motherhood, would score higher than bottle feeding mothers on the average rating of the Elation vs. Depression scale was not supported. The feeding groups did not differ on this rating at baby's age two weeks or at baby's age three months. Breast feeders were somewhat lower on two ratings of Own Sociability vs. Withdrawal at baby's age two weeks, on the low rating of Harmony vs. Anger at baby's three months, and on the low rating of Energy vs. Fatigue during both postpartum periods.

The lower sociability ratings of the breast feeders might be reflecting their greater preoccupation with the baby. Leifer (1977) writes that breast feeders felt a "sense of emotional union, an intensity that was not matched in other interactions with the baby" (p. 80). In fact, one breast feeding respondent in the present study volunteered, "Anti-social feelings don't apply to baby".

The findings that breast feeders indicated a greater loss of personal freedom and were less energetic than bottle feeders might be viewed as accurate reports

(rather than as mood indicators), in this situational context. That is, no one else could provide the frequent feedings typical of the early period of nursing.

There was some support for the basis of Hypothesis I in the content analyses of both postpartum periods. That is, breast feeders did indicate greater enjoyment of motherhood. They made more comments, and more positive comments, about motherhood and the baby. The conflict expressed by working breast feeders about leaving the baby suggests they may have been feeling more attached to their infants (relative to bottle feeders), and this conflict was reflected in their lower mood levels (relative to breast feeders who remained at home). Bottle feeders, on the other hand, had little to say about motherhood, and the comparison of the mood levels of working bottle feeders to non-working bottle feeders reflected an apparent indifference about returning to work. Admittedly, these are not hard data, as the number of bottle feeders was only eight at the second postpartum period. Nevertheless, the bottle feeders' lesser enthusiasm about motherhood is compatible with findings that they tended to regard feeding (a large part of early infant care) as "neutral and boring" (Leifer, 1977) and "noneventful" (Berg-Cross et al., 1979).

The questionnaire item, "Which best expresses your evaluation of motherhood?" might conceivably elicit a

socially desirable response. In fact, at baby's age two weeks and at baby's age three months, all respondents answered either "enjoyable" or "exceptionally meaningful". Denmark (1979) writes that, due to the exaltation of motherhood by society, women may keep negative feelings to themselves. The breast feeders' enthusiasm does somewhat transcend that of bottle feeders on this item at baby's three months, however, and the direction of the results is in line with the content analysis.

The question then arises, "If there are indications that breast feeders are finding motherhood more gratifying than bottle feeders, why do the Personal Feeling Scales not reflect this?" One possible answer is that the breast feeding mothers are experiencing, along with the positive input, a greater frequency and variety of internal and external stressors.

The Energy vs. Fatigue scale and the content analysis both indicate that breast feeders are more fatigued during both postpartum data collection periods. At baby's age three months, over a third of the breast feeders and three fourths of the bottle feeders returned to work. The mood scale data indicate that, although bottle feeders appeared indifferent about returning to work, breast feeders were distressed about it (see Table 5).

The breast feeders appear to have endured greater physical distress, as well. At baby's age two weeks,

milk supply and baby's requirements must be coordinated through nearly constant feeding, and milk leakage and nipple soreness are common. The content analysis provided evidence for the occurrence of these difficulties.

At baby's age three months, three fourths of the breast feeders were totally amenorrheic and all but one had not had a full period (compared to the bottle feeders, of whom all had had a full period). This information confirmed breast feeders' low estrogen status, which was the basis of their greater frequency of discomfort and lack of lubrication during sexual relations. In addition to the obvious unpleasantness of these symptoms, per se, breast feeders indicated some concern about them.[2] Too, low estrogen levels during menstrual and premenstrual days have been implicated in findings of depression and anxiety during these periods.

Thus, during the mood data collection at baby's age two weeks, breast feeders were feeling more fatigued, suffering the minor discomforts typical of the early breast feeding period, and beginning to worry about having to return to work. At baby's age three months,

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[2]The attributions posited by some of the breast feeding respondents about their difficulties with sexual relations indicated they had not been informed that these symptoms were normal and temporary during lactation. A lengthy and explicit article on "Sex and the New Parent" in the November, 1985 issue of American Baby magazine makes no mention of the typical effects of lactation on sexual response.

they continued to feel more fatigued, many were conflicted and upset about having returned to work, exhausted by the dual demands of outside employment and full lactation, experiencing discomfort and concern with the resumption of sexual relations, and perhaps deprived of the higher mood funcitoning correlated with estrogen peaks during the menstrual cycle.

Looker and Wessman's (1983) finding that breast feeding was related to higher hedonic levels provides further support for the argument that the positive effects of breast feeding, documented in this study, may have been counteracted by the situational stresses and low estrogen levels characteristic of full lactation. The infants in the Looker and Wessman observational study were 15 to 22 months old during the period of data collection, and it is highly unlikely that the mothers were fully lactating at this time.

The following profile of one respondent may serve to supplement the presentation of various stressors experienced by many of the breast feeding mothers.

Dr. Jane Doe.[3] Dr. Doe is between 29 and 38 years

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[3]At baby's age three months, this breast feeding respondent has begun to give a supplementary bottle one to three times weekly, and thus does not meet one criterion for the breast feeding group during this period. However, as she so articulately describes the difficulties alluded to by many of the breast feeders during this period, she was selected for this profile.

of age, and has a medical degree. Her physical health is excellent, and she is averaging 6.5 hours of sleep nightly. When her son was two weeks old, she wrote:

> The routine is monotonous to describe to anyone else, but I'm not bored with it. I'm completely preoccupied with the baby... When I return to work in a few weeks, I'll regret not spending more time with my son.

At baby's age three months, she very much enjoys caring for him, finds him no trouble at all to care for, and feels somewhat more maternal than she did when he was two weeks old. During this period, she is working outside of the home for 40+ hours weekly in academic medicine and research. Her husband helps her with the housework for between five and ten hours a week.

Breast feedings last for between 31 to 40 minutes. The baby is given no solid food, and from one to three bottles per week of formula. She pumps breast milk to leave for him seven or more time per week. She is, in essence, fully lactating, as she has not yet had a menstrual period.

She has resumed having sexual relations with her husband, and reports that her sexual desire is much less than before pregnancy. She is experiencing some difficulties with sexual relations, and is not totally uncon-

cerned about this.

She indicates feeling fatigued and pressured in random comments, such as "Baby wouldn't nap today, and neither one of us had enough sleep", and "Boss changed by schedule arbitrarily, to a more strenuous rotation". At baby's age three months, she writes:

> I feel I'm doing too many things at once right now, and not doing them all properly. I'm struggling with a decision whether to stay in academic medicine and research or to go into practice. Right now, when I'm seeing patients all day, I can't get to the lab. Now that I have the baby I can't work evenings. I am happy to be home with him, but I'm feeling pressure at work for falling way behind.
>
> Also, I'm still nursing and resent unexpected changes in my daily routine which interfere with my time to use the breast pump. Since I have to leave promptly at five (day care closes at 5:30) I have to make every moment at work count, and I'm made to feel that I'm taking "extra" time out because of my baby. I'm getting home each day utterly exhausted.

Dr. Doe's <u>average</u> Elation vs. Depression mean at baby's age three months was 5.00 (compared to 5.91 for all respondents during this period), and her within-day variability was greater than that of bottle feeders, on

six out of the eight Personal Feeling Scales.

Another possible explanation for the failure of breast feeders' mood ratings to transcend those of bottle feeders is that, as a group, they were better educated than bottle feeders. The negative correlations between level of education and mood levels may have been a factor in inhibiting the mood ratings of breast feeders.

Hypothesis II

The hypothesis that breast feeders would manifest greater variability than bottle feeders on the Personal Feeling Scales was supported at baby's age three months, but not at baby's age two weeks.

It is of interest that portions of Dr. Jane Doe's essay present her as a prototype of Wessman and Ricks' (1966) variable subject. They write that variable subjects would function at higher levels of activation, and that their self reproaches "were that they spread themselves too thin" (p. 250).

The breast feeders' higher high ratings (relative to bottle feeders) on Confidence vs. Feeling of Inadequacy and Energy vs. Fatigue, at baby's age three months, are consistent with Wessman and Ricks' (1966) findings that variable women tended to associate average daily mood ratings with the low for the day (p. 85).

The greater variability of the breast feeders suggests that caution be used in weighing the effects of the various stressors cited, on their Personal Feeling Scales mean scores. While it appears reasonable to assume that the additional physical and emotional burdens they carried would have deleterious effects on their hedonic level, it is important to consider that variable subjects tend to be less repressed and more expressive than stable subjects (Wessman and Ricks, 1966). Wessman and Ricks report that anxiety and conflict were expressed by the variable subjects. Is it then possible that content analysis comments on conflict about returning to work might be an artifact of the greater expressiveness of the variable breast feeders? The fact that bottle feeders were as prolific as breast feeders in the production of other assorted complaints, however, argues against this possibility, and for the validity of assumptions based on the content analysis.

In this sample, the women who bottle fed were more variable when stressed, whereas the women who breast fed were either more variable or equally variable when not stressed. If additional research were to replicate these findings, one would be led to speculate about whether this phenomenon is attributable to hormonal effects, or to some underlying personality difference between groups.

Hypotheses IIIa and IIIb

It is of interest that, while breast feeders who remained at home with the baby manifested a greater sense of fulfillment and personal freedom than breast feeders who returned to work, the mood levels of working bottle feeders and non-working bottle feeders did not differ. Consistent with content analysis findings are the working breast feeders' greater fatigue, anxiety, and sense of inadequacy (relative to non-working breast feeders), and bottle feeders' apparent indifference about returning to work.

Hypothesis IV

The failure of support with the housework and/or the baby to manifest effects on mood levels was somewhat surprising. Perhaps at baby's age two weeks, housekeeping is not a priority, and at baby's age three months it is difficult to tease out these effects, as a great deal of help with house and baby is likely to covary with mother's full-time employment.

General Discussion

Contrary to Leifer's (1977) finding that negative mood perseverated throughout the early postpartum months, was the finding that the mean hedonic level of all re-

spondents in this sample rose from prepartum to baby's age two weeks, and from baby's age two weeks to baby's age three months. In fact, from prepartum to baby's age three months, all respondents gained on Fullness vs. Emptiness of Life, Harmony vs. Anger, Tranquillity vs. Anxiety, Energy vs. Fatigue, Elation vs. Depression, and Own Sociability vs. Withdrawal (Confidence vs. Feeling of Inadequacy remained unchanged), and lost on Personal Freedom vs. External Constraint. Overall, it seemed to be an equitable exchange!

The finding that boys' mothers gained somewhat more in maternal feeling than girls' mothers at baby's age two weeks is compatible with Leifer's (1977) findings that most women wanted the baby to look like their husbands, and almost all expressed a preference for a boy.

The finding that younger women were higher on mood level is not surprising, and appears to provide additional validity for the Personal Feeling Scales. In meeting the demands of a two-week-old baby, youth is decidedly an advantage. The findings of younger women's greater variability is an interesting one, and an attempt to replicate it would be worthwhile.

The negative correlation between hedonic level and level of education in this sample is unexpected and puzzling. One possible explanation is that the better educated women are more accurate, and thus tended to be

more conservative in selecting the descriptive mood phrases of the Personal Feeling Scales. This explantion seems weak, however, in that the negative correlations between mood levels and level of education are found in more of the mood ratings at baby's age two weeks (19 ratings) than during the prepartum period (only 5 ratings). The fact that the better educated women's lower ratings were more pervasive after they had become mothers suggests that the actual experience of motherhood (rather than the wording of the PFS) was interacting with the level of education (see Table 9).

A second possiblity is that the better educated women have been exposed to a greater variety of challenges and fulfillments, both academically and at work, and thus are finding motherhood less interesting in comparison. However, taken conjointly, the following considerations argue against this explanation: (1) Six of the seven breast feeders who expressed conflicts about returning to work (during both postpartum periods) were highly educated. In fact, of these six women, two had some graduate education, two had earned graduate or professional degrees, and two were working at the post-graduate level. (2) Dr. Jane Doe (one of the most highly educated women in the sample) specifically asserted that she was "completely preoccupied with the baby" and not bored with the routine. Another respondent in the better

educated group of breast feeders explained, "I don't feel particularly hampered or constrained because I actually like to take care of my child. What I `want to do' has changed since I've become more accustomed to being a mother".

The third and only remaining possibility that comes to mind is that better educated women have internalized the current societal expectations that women ought to be achieving in areas beyond the traditional one. Societal regard for caregiving as a meaningful activity is reflected in the above respondent's wording, "I actually like to take care of my child". Her use of the word "actually" suggests her anticipation that others will find it highly suspicious that a well educated woman can find full time child care a challenging and fulfilling occupation. Thus, during the period that these women are "just housewives and mothers" (baby's age two weeks), their self-concepts are discrepant from societally generated self-expectations. The possiblity that the discrepancy between self-concept and ideal is at the basis of the lower hedonic levels of the better educated women is consistent with the Wessman and Ricks (1966) finding that, in lower hedonic level, the approximation of self and ideal are further apart (relative to higher hedonic level). Thinking along these lines, the better educated women's lack of confidence and greater anxiety

would follow, as they would likely regard their daily activities as less meaningful than they might be.

Denmark's (1979) point that society tends to exalt motherhood was supported in this study, via the exclusively positive responses to the questionnaire item evaluating motherhood. This fact, considered together with the possibility that society harbors disdain for women who are "just" mothers, presents a paradox. On the one hand, women profess to have a high regard for the motherhood role. On the other hand, it appears as if better educated women are uncomfortable about themselves in a role that lacks extra-familial achievement, as evidenced by their lower mood ratings (relative to less educated women).

It is enlightening to consider the breast feeders who rated motherhood as "exceptionally meaningful" (rather than merely "enjoyable"), at baby's age two weeks. All of these exclusively breast feeding women were, by choice, maximally involved with mothering activities, and all gave motherhood the highest rating. It seems reasonable to assume that this group of respondents felt that mothering was a meaningful activity, and a major priority. Yet, the better educated of these breast feeders manifested less self confidence and less emotional satisfaction than the less educated breast feeders in this subgroup, on all three ratings of Confidence vs.

Feeling of Inadequacy, and Fullness vs. Emptiness of life (see Table 11).

This suggests that, among the better educated subgroup of maternal and motivated breast feeders who regarded motherhood as "exceptionally meaningful", some factor was operating to inhibit the feelings of self-confidence and emotional satisfaction that would logically emanate from the performance of important and meaningful work.

Apparently society demands that we hail the importance of motherhood, but aspire to something more important.

Conclusions

While the expectation that breast feeders would find motherhood more gratifying did acquire some support in this study, the prediction that they would score higher on the Elation vs. Depression scale did not. It is suggested that the lack of unanimity between content analysis and Personal Feeling Scales data was due, in part, to the low estrogen levels and situational stressors idiosyncratic to early breast feeding, and in part, to the discrepancy between the self-expectations and self concepts of the (better educated) breast feeding mothers. It is thus proposed that, while the satisfactions of breast feeding may have served to raise their mood levels, these demographic, hormonal and situational factors may have tended to lower them.

Low estrogen levels have been implicated in the lower mood levels found during the menstruum and premenstruum, and there remains the possibility that, in this study, the constantly low estrogen levels of the fully lactating women lowered their mood ratings. As low estrogen levels prevail in postmenopausal women, as well (Berkow, 1982), research on Elation vs. Depression ratings in this group would seem worthwhile. A finding of lower hedonic levels in all low estrogen groups would

invite attention to the role of this hormone in mood states, and might serve to challenge the premise that menstrual and premenstrual complaints are generated by stereotypical views of these functions.

In the recent past, middle class women had fewer taxing obligations, relative to the present. Fewer were breast feeding and fewer had fulfilling and demanding careers. The concurrent phenomena of the upsurge in breast feeding and the two-income family have resulted in an overwhelming agenda for the young mother. Women who opt for the benefits of breast feeding for themselves and their infants should have support from their work environments, as well as from physicians and families. In order to ease potential stresses among breast feeders, obstetrical patients who plan to nurse ought to be counseled about the normal and temporary effects of lactation on sexual response, and should be advised to plan additional rest during the early postpartum weeks.

The possiblity that current societal contempt for the lack of extra-familial achievement in women serves to dampen the pleasures of motherhood should certainly be evaluated in a full research design. If well educated women have the inclination to spend the critical early years shaping their children, this ought to be sanctioned and commended, as the outcome would be beneficial to society.

TABLE 1

All Respondents at Three Time Periods, Elation vs. Depression average

	N	Mean Score	Min.	Max.	Mean Daily Range	Min. MDR	Max. MDR
Prepartum	59	5.51	4.00	7.00	2.50	.43	5.29
Two weeks	59	5.66	4.29	7.57	2.44	.00	5.29
Three months	45	5.91	4.57	7.86	2.34	.00	4.86

TABLE 2

Mean Change Score (on average ratings) of All Respondents,
All Scales, Three Time Periods

Scale	Prepartum to 2 weeks (N=58)	P	2 weeks to 3 months (N=44)	P	Prepartum to 3 months (N=44)	P
Fullness	+.17	.10	+.14	.07	+.22	.07
Harmony	+.04	n.s.	+.19	.09	+.17	.09
Tranquillity	+.12	n.s.	+.19	.10	+.24	.03*
Confidence	+.01	n.s.	+.26	.04*	+.13	n.s.
Energy	+.27	.01*	+.27	.07	+.43	.002*
Elation	+.17	.07	+.27	.002*	+.33	.0009*
Pers. Freedom	-.63	.0002*	+.46	.0005*	-.30	.09
Sociability	+.04	n.s.	+.38	.001*	+.28	.02*

Paired comparisons T-Tests
* $p < .05$

TABLE 3

Differences Between Feeding Groups at Baby's Age Two Weeks, Where P < .10

Scales	Breast Feeders (N = 32)	Bottle Feeders (N = 14)	P
Energy, low	3.43	4.28	.01*
Pers. Freedom, high	6.14	6.86	.07
Pers. Freedom, avg.	5.15	5.74	.10
Sociability, avg.	5.54	5.99	.10
Sociability, low	4.32	4.92	.07

T-Tests
* p < .05

TABLE 4

General Analysis and Clean Analysis of Feeding Groups on Mean Daily Range at Baby's Age Three Months

	General Analysis, Mean Daily Range			Clean Analysis, Mean Daily Range		
Scale	Bottle (N=8)	Breast (N=14)	P	Bottle (N=6)	Breast (N=13)	P
Fullness	1.84	2.57	.08	1.46	2.84	.005*
Harmony	1.95	3.12	.05*	1.47	3.34	.01*
Tranquillity	2.19	3.01	.05*	1.62	3.09	.0008*
Confidence	1.78	2.45	.08	1.41	2.66	.003*
Energy	1.60	2.90	.002*	1.35	2.97	.0002*
Elation	1.92	2.56	n.s.	1.46	2.43	.08
Pers. Freedom	1.72	2.51	n.s.	1.26	2.48	.01*
Sociability	1.75	2.45	n.s.	1.45	2.45	.01*

T-Tests
* $p < .05$

TABLE 5

Comparison of Mood Ratings of Working Breast Feeders and Non-Working Breast Feeders at Three Months

Scale and rating	Working (N=5)	Non-Working (N=9)	P
Fullness, high	7.09	7.83	.08
Fullness, average	5.80	6.52	.05*
Fullness, low	4.06	5.51	.002*
Tranquillity, high	6.80	7.55	.05*
Tranquillity, average	5.46	6.33	.03*
Tranquillity, low	3.51	4.70	.01*
Confidence, average	5.63	6.27	.07
Confidence, low	4.20	5.05	.05*
Energy, high	5.94	6.86	.06
Energy, average	4.63	5.63	.04*
Energy, low	2.89	4.05	.008*
Elation, high	3.86	4.83	.04*
Personal Freedom, high	6.17	7.38	.07
Personal Freedom, average	4.83	6.22	.03*
Personal Freedom, low	3.46	4.98	.004*

T-Tests
* $p < .05$

TABLE 6

Differences Between Age Groups on Mood Level at Baby's Age Two Weeks, Where P < .10

Scale	19-28 years old (N=31)	29-38 years old (N=27)	P
Fullness, high	7.53	7.04	.02*
Harmony, high	7.48	7.15	.10
Tranquillity, high	7.24	6.58	.005*
Tranquillity, average	5.89	5.51	.10
Confidence, high	7.12	6.56	.01*
Energy, high	6.51	5.88	.02*
Energy, average	5.26	4.84	.07
Elation, high	7.00	6.53	.04*
Elation, average	5.82	5.50	.08
Personal Freedom, high	6.63	6.00	.04*
Sociability, high	7.02	6.29	.003*
Sociability, average	5.88	5.34	.01*

T-tests
* p < .05

TABLE 7

Differences Between Age Groups on Mean Daily Range at Baby's Age Two Weeks

Scale	19-28 years old (N=31)	29-38 years old (N=27)	P
Fullness	2.67	1.97	.01*
Harmony	2.91	2.34	.03*
Tranquillity	2.90	2.19	.01*
Confidence	2.39	2.04	n.s.
Energy	2.79	2.33	.09
Elation	2.64	2.15	.06
Personal Freedom	2.41	2.03	n.s.
Sociability	2.44	1.95	.03*

T-Tests
* $p < .05$

TABLE 8

Significant Correlations Between Level of Education and PFS Ratings at Baby's Age Two Weeks

Scale and rating	Product-moment correlation	P
Fullness, high	-.33	.04
Fullness, average	-.33	.04
Fullness, low	-.33	.04
Tranquillity, high	-.43	.006
Tranquillity, average	-.47	.002
Tranquillity, low	-.37	.02
Confidence, high	-.45	.003
Confidence, average	-.47	.002
Confidence, low	-.39	.01
Elation, high	-.34	.03
Elation, average	-.42	.006
Personal Freedom, high	-.34	.03
Sociability, high	-.45	.004
Sociability, average	-.45	.004
Sociability, low	-.37	.02

N=40

TABLE 9

Comparison of Mood Ratings of Better Educated Women and Less Educated Women**

	Prepartum (N=59)			Two Weeks (N=59)			Three Months (N=45)		
PFS Scale	Better educ.	Less educ.	P	Better educ.	Less educ.	P	Better educ.	Less educ.	P
Fullness, high	7.02	7.34	.07	7.08	7.60	.01*	7.28	7.80	.03*
Fullness, avg.				6.03	6.39	.09	6.15	6.60	.09
Fullness, low									
Harmony, high				7.15	7.55	.05*			
Harmony, avg.									
Harmony, low									
Tranquillity, high	6.64	7.10	.02*	6.66	7.28	.007*	6.83	7.37	.02*
Tranquillity, avg.				5.49	5.99	.03*	5.75	6.18	.08
Tranquillity, low				4.16	4.62	.10			
Confidence, high	6.70	7.10	.03*	6.57	7.24	.002*	6.90	7.30	.05*
Confidence, avg.				5.53	6.14	.005*			
Confidence, low				4.41	4.92	.07			
Energy, high	5.93	6.31	.07	5.93	6.61	.01*	6.17	6.71	.04*
Energy, avg.				4.86	5.35	.03*	5.10	5.60	.05*
Energy, low				3.35	4.03	.02*	3.81	4.34	.08
Elation, high				6.57	7.06	.03*			
Elation, avg.				5.51	5.89	.04*			
Elation, low									
Pers. Freedom, high				5.90	6.93	.0005*	6.31	7.35	.0006*
Pers. Freedom, avg.				4.99	5.65	.02*	5.33	6.19	.005*
Pers. Freedom, low							4.32	4.96	.06*
Sociability, high	6.56	6.96	.06	6.33	7.14	.0007*	6.83	7.32	.08
Sociability, avg.				5.33	6.02	.001*			
Sociability, low				4.16	4.85	.01*			

* $p < .05$

** T-tests: "Better ed." = at least college degrees; "less ed." = max. of some college.

TABLE 10

Relative Effects of Five Variables Upon Mean Average PFS Ratings at Baby's Age Two Weeks**

	Fullness $\bar{X}$=6.21		Harmony $\bar{X}$=6.21		Tranquillity $\bar{X}$=5.74		Confidence $\bar{X}$=5.86	
Variables	F	P	F	P	F	P	F	P
Age	1.20	.32	.49	.62	.69	.51	.57	.57
Feeding Method	1.10	.29	.17	.68	.15	.70	.37	.55
Level of Education	7.50	.009*	2.50	.13	9.24	.004*	9.11	.005*
Help with baby	.19	.67	.04	.85	1.50	.23	.01	.92
Help with house	.67	.42	.00	.98	.50	.48	.26	.61

	Energy $\bar{X}$=5.10		Elation $\bar{X}$=5.71		Pers. Freedom $\bar{X}$=5.33		Sociability $\bar{X}$=5.68	
Variables	F	P	F	P	F	P	F	P
Age	.15	.86	.07	.93	.53	.59	.00	.995
Feeding Method	.49	.49	.06	.81	1.07	.31	.03	.87
Level of Education	3.23	.08	5.95	.02*	3.01	.09	8.06	.007*
Help with baby	.27	.61	.05	.82	1.51	.23	.26	.61
Help with house	.11	.74	.19	.67	1.38	.25	.01	.90

* $p < .05$

** N = 46 (Limited to the 14 bottle feeders and 32 breast feeders during this period, by the variable, "feeding method").

ANOVA

TABLE 11

Group Means of Better Educated and Less Educated Breast Feeders Who Rated Motherhood as "Exceptionally Meaningful" on Two Scales at Baby's Age Two Weeks

Scale and rating	Better educated breast feeders (N=16)	Less educated breast feeders (N=9)
Confidence, low	4.71	5.09
Confidence, average	5.81	6.33
Confidence, high	6.68	7.36
Fullness, low	4.93	5.49
Fullness, average	6.13	6.56
Fullness, high	7.21	7.68

Appendix 1

DUKE UNIVERSITY MEDICAL CENTER: DEPARTMENT OF OBSTETRICS

First Time Motherhood

The purpose of this study is to learn more about the feelings and experiences of first-time motherhood.

Participants in the study will be asked to complete three sets of written questionnaires: One during late pregnancy; one when the baby is two weeks old; and one when the baby is three months old.

If you agree to participate, your name will not appear on any of the questionnaires. A code number will serve to match up the three sets of questionnaires as having come from the same respondent.

If this is your first pregnancy, and if you think you might care to participate in this research, please leave your name and telephone number with _____. THIS WOULD NOT CONSTITUTE YOUR AGREEMENT TO PARTICIPATE. You will then be contacted by the principal investigator, who will further describe the research, and answer any questions you may have.

If you then agree to participate, you will receive a consent form and questionnaires.

Thank you.

Appendix 2

DUKE UNIVERSITY MEDICAL CENTER

First-Time Motherhood

Here is your packet of materials for the study on First-Time Motherhood.

The packet should contain three postage-paid envelopes, marked A, B, and C (on the back of the envelope).

Envelope A: The two sets of materials in Envelope A should be filled out and mailed during the sixth, seventh, or eighth month of pregnancy. These are:

- PREPARTUM QUESTIONNAIRE
- seven copies of the DAILY RECORD OF PERSONAL FEELINGS (with the Personal Feeling Scales and instructions)

Envelope B: The two sets of materials in Envelope B should be filled out and mailed when your baby is two weeks old. These are:

- POSTPARTUM QUESTIONNAIRE #1
- seven copies of the DAILY RECORD OF PERSONAL FEELINGS (with the Personal Feeling Scales and instructions)

Envelope C: The two sets of materials in Envelope C should be filled out and mailed when your baby is three months old. These are:

- POSTPARTUM QUESTIONNAIRE #2
- seven copies of the DAILY RECORD OF PERSONAL FEELINGS (with the Personal Feeling Scales and instructions)

We suggest that you store these materials in a place where you can find them easily for future use.

If you have any questions about the use of these materials, please contact Helen Goodfield at _____.

Thank you for agreeing to participate in this research.

Appendix 3

INSTRUCTIONS FOR USING THE "DAILY RECORD OF PERSONAL FEELINGS"

We expect that moods and feelings will be affected by the experience of pregnancy and motherhood, and that these experiences will, in turn, be affected by moods and feelings. Most people experience some changes in their moods and feelings, both during the day, and from day to day. We are asking that you report on your moods and feelings each evening for one week (seven consecutive evenings before retiring).

To collect this information in a systematic way, we are using the Personal Feeling Scales. These eight items on the following three pages are:

I. Fullness vs. Emptiness of Life
II. Harmony vs. Anger
III. Tranquillity vs. Anxiety
IV. Confidence vs. Feeling of Inadequacy
V. Energy vs. Fatigue
VI. Elation vs. Depression
VII. Personal Freedom vs. External Constraint
VIII. Own Sociability vs. Withdrawal

Each of these items has ten descriptive ratings (9...0) listed beneath it. Please use these ratings on each of the eight items to fill in the corresponding eight items on the attached answer sheet, the DAILY RECORD OF PERSONAL FEELINGS.

On this DAILY RECORD OF PERSONAL FEELINGS we would like you to report the following three ratings on each of the eight items:

HIGHEST: the top rating on the scale that you experienced during the day, even though it may have been only for a brief moment.

AVERAGE: your overall summary for the day on that scale, i.e., how you felt in general that day.

INSTRUCTIONS FOR USING THE "DAILY RECORD OF PERSONAL FEELINGS" -- continued

LOWEST: the bottom rating on the scale that you experienced during the day, even though it may only have been for a brief moment.

Some of the feelings described may be central in your emotional life, while others may seem pretty irrelevant to you. But in any case, please do report on all eight items for seven nights. Also, each of us has his own personal ways of expressing feelings, and the descriptive phrases provided may not sound quite right to you. So please regard these phrases as rough approximations, and use them as best you can to indicate the relative degree of intensity of your feelings.

In addition, please complete items "A" through "E" on the DAILY RECORD OF PERSONAL FEELINGS for seven nights.

PLEASE NOTE: We are expecting that there will be questions about how to fill out the DAILY RECORD OF PERSONAL FEELINGS. Therefore, please do not hesitate to contact Helen Goodfield at _____ with any questions you may have.

Please mail the seven copies of the DAILY RECORD OF PERSONAL FEELINGS with the completed POSTPARTUM QUESTIONNAIRE #1 in the postage paid envelope. Thank you.

Personal Feeling Scales

Do not mark the items below. Instead, use the numbers (9...0) beside the ratings you choose for each item to mark the corresponding item on the DAILY RECORD OF PERSONAL FEELINGS. There are seven copies of the DAILY RECORD OF PERSONAL FEELINGS (one for each of the seven evenings you will be completing it).

I. Fullness vs. Emptiness of Life (how emotionally satisfying, abundant or empty, your life felt today)

9. Consummate fulfillment and abundance.
8. Replete with life's abundant goodness.
7. Filled with warm feelings of contentment and satisfaction.
6. My life is ample and satisfying.
5. Life seems fairly adequate and fairly satisfying.
4. Some slight sense of lack, vague and mildly troubling.
3. My life seems deficient, dissatisfying.
2. Life is pretty empty and barren.
1. Desolate, drained dry, impoverished.
0. Gnawing sense of emptiness, hollowness, void.

II. Harmony vs. Anger (how well you got along with, or how angry you felt toward, other people)

9. Boundless good will and complete harmony.
8. Enormous good will and great harmony.
7. Considerable good will.
6. Got along well and rather smoothly.
5. Got along pretty well, more or less good feeling.
4. A little bit annoyed, somewhat "put out". Minor irritations.
3. Annoyed, irritated, provoked.
2. Very angry. Ill will.
1. Enraged. Seething with anger and hostitility.
0. Violent hate and fury. Desire to attack, destroy.

Personal Feeling Scales -- continued

III. Tranquillity vs. Anxiety (how calm or troubled you felt)

9. Perfect and complete tranquillity. Unshakably secure.
8. Exceptional calm, wonderfully secure and carefree.
7. Great sense of well-being. Essentially secure, and very much at ease.
6. Pretty generally secure and free from care.
5. Nothing particularly troubling me. More or less at ease.
4. Somewhat concerned with minor worries or problems. Slightly ill at ease, a bit troubled.
3. Experiencing some worry, fear, trouble, or uncertainty. Nervous, jittery, on edge.
2. Considerable insecurity. Very troubled by significant worries, fears, uncertainties.
1. Tremendous anxiety and concern. Harassed by major worries and fears.
0. Completely beside myself with dread, worry, fear. Overwhelmingly distraught and apprehensive. Obsessed or terrified by insoluble problems and fears.

IV. Confidence vs. Feeling of Inadequacy (how self-assured and adequate, or helpless and inadequate, you felt)

9. Nothing is impossible to me. Can do anything I want.
8. Feel remarkable self-assurance. Sure of my superior powers.
7. Highly confident of my capabilities.
6. Feel my abilities sufficient and my prospects good.
5. Feel fairly adequate.
4. Feel my performance and capabilities somewhat limited.
3. Feel rather inadequate.
2. Distressed by my weakness and lack of ability.
1. Wretched and miserable. Sick of my own incompetence.
0. Crushing sense of weakness and futility. I can do nothing.

Personal Feeling Scales -- continued

V. Energy vs. Fatigue (how energetic, or tired and weary, you felt)

9. Limitless zeal. Surging with energy. Vitality spilling over.
8. Exuberant vitality, tremendous energy, great zest for activity.
7. Great energy and drive.
6. Very fresh, considerable energy.
5. Fairly fresh. Adequate energy.
4. Slightly tired. Indolent. Somewhat lacking in energy.
3. Rather tired. Lethargic. Not much energy.
2. Great fatigue. Sluggish. Can hardly keep going. Meager resources.
1. Tremendously weary. Nearly worn out and practically at a standstill. Almost no resources.
0. Utterly exhausted. Entirely worn out. Completely incapable of even the slightest effort.

VI. Elation vs. Depression (how elated or depressed, happy or unhappy, you felt today)

9. Complete elation. Rapturous joy and soaring ecstasy.
8. Very elated and in very high spirits. Tremendous delight and buoyancy.
7. Elated and in high spirits.
6. Feeling very good and cheerful.
5. Feeling pretty good, "O.K."
4. Feeling a little bit low. Just so-so.
3. Spirits low and somewhat "blue".
2. Depressed and feeling very low. Definitely "blue."
1. Tremendously depressed. Feeling terrible, miserable, "just awful."
0. Utter depression and gloom. Completely down. All is black and leaden.

Personal Feeling Scales -- continued

VII. Personal Freedom vs. External Constraint (how much you felt you were free or not free to do as you wanted)

9. Absolutely free to do whatever I like.
8. Independent and free to do just about what I want.
7. Ample scope to go my own way.
6. Free, within broad limits, to do pretty much what I want to do.
5. Can do a fair amount on my own initiative and in my own fashion. No particularly restrictive limitations.
4. Somewhat constrained and hampered. Not free to do things my own way.
3. Checked and hindered by too many demands and constraints.
2. Hemmed in, cooped up. Forced to do things I don't want to do.
1. Trapped, oppressed.
0. Overwhelmed, smothered. Can't draw a free breath.

VIII. Own Sociability vs. Withdrawal (how socially outgoing or withdrawn you felt today.

9. Immensely sociable and outgoing.
8. Highly outgoing, congenial and friendly.
7. Very sociable and involved in things.
6. Companionable. Ready to mix with others.
5. Fairly sociable. More or less accessible.
4. Not particularly outgoing. Feel a little bit unsociable.
3. Retiring, would like to avoid people.
2. Very detached and withdrawn. A great distance between myself and others.
1. Self-contained and solitary.
0. Completely withdrawn. Want no human contact.

Appendix 4

Code # _____

Today's date _____

DAILY RECORD OF PERSONAL FEELINGS

The eight items listed below correspond to the eight items given on the Personal Feeling Scales. Please use the ten descriptive ratings (9...1) given with each item on the Personal Feeling Scales to rate the eight items below.

Please fill in three ratings on each item, before retiring every day for seven consecutive evenings. Remember to record the highest and lowest you felt even though this may have been experienced for only a brief moment. The average represents your overall summary of the day.

I. Fullness vs. Emptiness of Life

Highest _____
Average _____
Lowest _____

II. Harmony vs. Anger

Highest _____
Average _____
Lowest _____

III. Tranquillity vs. Anxiety

Highest _____
Average _____
Lowest _____

IV. Confidence vs. Feeling of Inadequacy

Highest _____
Average _____
Lowest _____

DAILY RECORD OF PERSONAL FEELINGS -- continued

V. Energy vs. Fatigue

Highest _____
Average _____
Lowest _____

VI. Elation vs. Depression

Highest _____
Average _____
Lowest _____

VII. Personal Freedom vs. External Constraint

Highest _____
Average _____
Lowest _____

VIII. Own Sociability vs. Withdrawal

Highest _____
Average _____
Lowest _____

Please Complete Items "A" through "E":

A. Physical Health (check one):

6. Excellent _____
5. Good _____
4. Fair _____
3. Rather poor _____
2. Sick _____
1. Very sick _____

B. Hours of sleep last night? _____hours

C. Please specify nature and quantity of following consumed during past 24 hours:

1. medicines or other drugs _____
2. alcohol _____

DAILY RECORD OF PERSONAL FEELINGS -- continued

D. Have there been any stressful events among your family or close friends (illness, death, financial problems, separation, or other problems) that may be upsetting you at this time? If "yes" please elaborate:

1. yes _____
2. no _____

E. Any additional comments on how you are feeling, and why, are very valuable to us. Please use the other side of this page for this purpose. Thank you.

Appendix 5

Code # _____

PREPARTUM QUESTIONNAIRE

Now that you are in your sixth, seventh, or eighth month of pregnancy, we would like to learn how you are feeling, and about your expectations about the experience of new motherhood that you are approaching.

Please fill out this questionnaire just once, any time during the week in which you will be completing the DAILY RECORD OF PERSONAL FEELINGS of the Personal Feeling Scales for seven consecutive evenings before retiring. Then mail this questionnaire, together with all seven copies of the DAILY RECORD OF PERSONAL FEELINGS, in the postage paid envelope.

Each of the questions below is followed by several answers. Most people find it difficult to choose an answer from among those listed. That is, you may find occasionally that you will want to give a somewhat different answer. However, please do your best to select an answer that is closest to your own, and circle the letter beside it.

1. What is your age?

   a - less than 19 years
   b - 19 to 28 years
   c - 29 to 38 years
   d - 39 to 48 years
   e - more than 48 years

2. Is this your first pregnancy?

   a - yes
   b - no

PREPARTUM QUESTIONNAIRE -- continued

3. How have you been feeling physically during your pregnancy, thus far?

   a - wonderful
   b - pretty well
   c - sort of neutral
   d - not so well
   e - awful

4. As a child or teenager, did you ever have the opportunity to take care of babies?

   a - yes
   b - no

5. If "yes" on question #4, how much did you enjoy taking care of babies at that time?

   a - disliked it intensely
   b - it was somewhat of an unpleasant chore
   c - had no feelings about it one way or the other
   d - enjoyed somewhat
   e - very much enjoyed

6. As a child, did you ever play with baby dolls?

   a - yes
   b - no

7. If "yes" on question #6, how much did you enjoy playing with dolls at that time?

   a - very much enjoyed
   b - enjoyed somewhat
   c - didn't enjoy it ... just played with dolls to please friends or others

8. At this time, how much do you expect to enjoy taking care of your new baby, when he/she arrives?

   a - I expect to enjoy it very much
   b - I expect to enjoy it somewhat
   c - I expect to feel neutral about taking care of the baby
   d - I expect to find it somewhat of an unpleasant chore
   e - I expect to dislike intensely taking care of the baby

PREPARTUM QUESTIONNAIRE -- contined

9. When you were a child, how affectionate was your own mother (or the person who took care of you)?

   a - quite warm and affectionate
   b - somewhat warm and affectionate
   c - not distinctly affectionate or unaffectionate
   d - somewhat cool and unaffectionate
   e - quite cold and unaffectionate

10. At this time, how warm and affectionate do you expect you will be with your new baby, when he/she arrives?

   a - quite warm and affectionate
   b - somewhat warm and affectionate
   c - not distinctly affectionate or unaffectionate
   d - somewhat cool and unaffectionate
   e - quite cold and unaffectionate

11. Which best expresses your expectations about the experience of new motherhood? Would you say it will most likely be...

   a - an exceptionally meaningful experience
   b - enjoyable
   c - routine
   d - a chore
   e - an unpleasant period of my life

12. How are you planning to feed your baby?

   a - bottle feed only
   b - breast feed only
   c - some breast and some bottle

13. When is the birth of your baby expected (that is, expected "due date")?

   Please write the expected due date: _____

14. Was this pregnancy planned or unplanned?

   a - unplanned
   b - planned

PREPARTUM QUESTIONNAIRE -- continued

15. When you first learned that you were pregnant, how did you feel about the news? That is, were you...

    a - very unhappy about it
    b - somewhat unhappy about it
    c - neutral (not really unhappy or happy) about it
    d - somewhat happy about it
    e - very happy about it

16. Please indicate the highest level of education you have attained:

    a - some high school
    b - high school graduate
    c - some college
    d - college graduate
    e - some graduate or professional school
    f - graduate or professional degree
    g - postgraduate work (please specify): _____

17. Please indicate today's date: _____

18. Please add any information you would like to provide, and/or any comments you may have about this questionnaire:

Thank you for completing this questionnaire. Please mail it together with all seven copies of the DAILY RECORD OF PERSONAL FEELINGS in the postage paid envelope.

Appendix 6

Code # _____

POSTPARTUM QUESTIONNAIRE #1

Now that your baby is about two weeks old, we would like to have some information about your delivery and confinement, and to learn how things are going these days. Please complete this questionnaire just once, any time during the week in which you will be filling out the DAILY RECORD OF PERSONAL FEELINGS of the Personal Feeling Scales for seven consecutive evenings upon retiring. Then mail in this questionnaire, together with all seven copies of the DAILY RECORD OF PERSONAL FEELINGS, in the postage paid envelope.

As in the PREPARTUM QUESTIONNAIRE, please do your best to select an answer that is closest to your own, and circle the letter beside it.

1. Which answer best describes your evaluation of childbirth?

   a - an exceptionally negative experience
   b - a predominantly negative experience
   c - a fairly negative experience
   d - a neutral experience, not particularly negative or positive
   e - a fairly positive experience
   f - a predominantly positive experience
   g - an exceptionally positive experience

2. Was the delivery...

   a - a Caesarian delivery
   b - a vaginal delivery

3. What form of anesthesia was used?

   a - general (I was not awake during the delivery)
   b - local
   c - other (please specify) _____
   d - no anesthesia used

POSTPARTUM QUESTIONNAIRE #1 -- continued

4. What was your baby's weight at birth?

   a - under 4 pounds
   b - 4 to 5 pounds
   c - 5 to 6 pounds
   d - 6 to 7 pounds
   e - 7 to 8 pounds
   f - 8 to 9 pounds
   g - over 9 pounds

5. Was your baby in good health at birth?

   a - yes
   b - no

6. Did you spend time holding and/or touching your baby during the first hour immediately following birth?

   a - yes
   b - no

7. If "yes" on question #6, about how much time did you and your baby spend together immediately following the birth? (Just an approximate guess...)

   a - just a minute or two
   b - about 3 to 15 minutes
   c - about 16 to 30 minutes
   d - more than 30 minutes

8. Please use this space to write how the birth went, and your feelings about the experience.

9. Where was your baby born?

   a - hospital
   b - maternity or other birthing center
   c - at home
   d - other (please specify) _____

IF YOU SELECTED "a" ON QUESTION #9 (THAT IS, IF YOUR BABY WAS BORN IN A HOSPITAL), PLEASE ANSWER QUESTIONS #10, #11, AND #12. IF YOU DID NOT SELECT "a" ON QUESTION #9 (THAT IS, IF YOUR BABY WAS NOT BORN IN A HOSPITAL), PLEASE SKIP TO QUESTION #13.

POSTPARTUM QUESTIONNAIRE #1 -- continued

10. Did your baby stay in the hospital's central nursery or in your room?

    a - central nursery at all times
    b - central nursery except for feedings
    c - my room 24 hours a day
    d - my room except at night
    e - my room 12 or more hours a day
    f - my room 6 to 11 hours a day
    g - my room for 6 or fewer hours a day

11. Who fed the baby at night during the hospital stay?

    a - nursery staff or other helper
    b - sometimes myself, sometimes nursery staff or other helper
    c - only myself

12. What was your baby's age when he/she left the hospital?

    Please write the answer here: _____

ALL RESPONDENTS PLEASE RESUME HERE:

13. Is your baby a boy or a girl?

    a - boy
    b - girl

14. Which best expresses your evaluation of the experience of motherhood?

    a - an exceptionally meaningful experience
    b - enjoyable
    c - routine
    d - a chore
    e - an unpleasant period of my life

15. How "difficult" is your baby? That is, is caring for him/her easy or difficult?

    a - no trouble at all to care for
    b - fairly easy to care for
    c - manageable to care for
    d - somewhat difficult to care for
    e - extremely difficult to care for

POSTPARTUM QUESTIONNAIRE #1 -- continued

16. At this time, how much do you enjoy taking care of your baby?

    a - I dislike intensely taking care of the baby
    b - I just tolerate taking care of the baby
    c - I feel neutral about taking care of the baby
    d - I enjoy somewhat taking care of the baby
    e - I very much enjoy taking care of the baby

17. At this time, how warm and affectionate are you with your baby, generally?

    a - quite warm and affectionate
    b - somewhat warm and affectionate
    c - not distinctly affectionate or unaffectionate
    d - somewhat cool and unaffectionate
    e - quite cold and unaffectionate

18. Do you have anyone helping you care for the baby (paid employee, husband, relative or friend)?

    a - yes
    b - no

19. If "yes" on question #18, about how many hours of help with the baby do you get <u>per week from all helpers combined</u>?

    a - 1 to 4 hours total per week of help with the baby
    b - 5 to 10 hours total per week of help with the baby
    c - 11 to 20 hours total per week of help with the baby
    d - 21 to 30 hours total per week of help with the baby
    e - 31 to 40 hours total per week of help with the baby
    f - more than 40 hours total per week of help with the baby

20. Do you have anyone helping you with the housework and/or shopping (paid employee, husband, relative or friend)?

    a - no
    b - yes

POSTPARTUM QUESTIONNAIRE #1 -- continued

21. If "yes" on question #20, about how many hours of help with housework and/or shopping do you get per week from all helpers combined?

    a - 1 to 4 hours total per week of help with house work and/or shopping
    b - 5 to 10 hours total per week of help with house work and/or shopping
    c - 11 to 20 hours total per week of help with house work and/or shopping
    d - 21 to 30 hours total per week of help with house work and/or shopping
    e - 31 to 40 hours total per week of help with house work and/or shopping
    f - more than 40 hours total per week of help with house work and/or shopping

22. Does your baby require a middle-of-the-night feeding or feedings?

    a - yes
    b - no

23. If "yes" on question #22, who gives your baby the night feeding or feedings?

    a - sometimes I do, and sometimes baby's father or other helper
    b - never myself (baby's father or other helper feeds during the night)
    c - always myself, during the night

24. Are you presently breast feeding or bottle feeding your baby?

    a - breast feeding (some or all breast given)
    b - bottle feeding (no breast given)

IF BREAST FEEDING (SOME OR ALL BREAST FEEDING), PLEASE SKIP TO QUESTION #30, AND ANSWER QUESTIONS #30 THROUGH AND INCLUDING #38.

IF BOTTLE FEEDING (NO BREAST GIVEN), PLEASE ANSWER QUESTIONS #25 THROUGH #29, AND THEN SKIP TO QUESTIONS #37 AND #38.

POSTPARTUM QUESTIONNAIRE #1 -- continued

25. Who else feeds the baby? (Please circle all that apply.)

    a - baby's father or other relative
    b - nurse
    c - other helper
    d - only myself

26. Is any food other than formula given?

    a - yes
    b - no

27. If "yes" on question #26, please circle all that apply:

    a - juice
    b - sugar water
    c - baby food, cereal, or other "solids"
    d - other (please specify) _____

28. About how long does a bottle feeding usually take (count sucking time only, not time out for changing diaper)? If feedings vary, choose an average time.

    a - 5 to 10 minutes
    b - 11 to 20 minutes
    c - 21 to 30 minutes
    d - 31 to 40 minutes
    e - more than 40 minutes

29. Do you ever need to enlarge a nipple opening?

    a - yes
    b - no

IF BOTTLE FEEDING, PLEASE SKIP TO QUESTIONS #37 AND #38.

IF BREAST FEEDING, PLEASE ANSWER QUESTIONS #30 THROUGH AND INCLUDING #38.

POSTPARTUM QUESTIONNAIRE #1 -- continued

30. How many bottles of supplementary formula are given per week?

a - one to three bottles per week
b - four to six bottles per week
c - seven or more bottles per week
d - no supplementary formula is given

31. Is your baby ever given your breast milk in a bottle?

a - yes
b - no

32. If "yes" on question #31, how often is this done?

a - one to three times per week
b - four to six times per week
c - seven or more times per week

33. Is any food other than breast milk or formula given?

a - yes
b - no

34. If "yes" on question #33, please circle all that apply:

a - juice
b - sugar water
c - baby food, cereal, or other "solids"
d - other (please specify) _____

35. If your baby gets any formula, your breast milk in a bottle, or any of the items listed in question #34, who else feeds the baby? Please circle all that apply:

a - baby's father or other relative
b - nurse
c - other helper
d - only myself

POSTPARTUM QUESTIONNAIRE #1 -- continued

36. About how long does a breast feeding usually take (count sucking time only, not time out for changing diaper)? If feedings vary, choose an average time.

a - 5 to 10 minutes
b - 11 to 20 minutes
c - 21 to 30 minutes
d - 31 to 40 minutes
e - more than 40 minutes

ALL RESPONDENTS PLEASE RESUME HERE:

37. According to your best recollection, how do your maternal feelings these days compare with your maternal feelings during the latter part of your pregnancy (the last time you filled out a questionnaire for this study)?

a - I feel a great deal less maternal now than I did in late pregnancy
b - I feel somewhat less maternal now than I did in late pregnancy
c - I feel about the same now as I did in late pregnancy
d - I feel somewhat more maternal now than I did in late pregnancy
e - I feel a great deal more maternal now than I did in late pregnancy

38. Please add any information you would like to contribute, and/or any comments you may have about this questionnaire:

Thank you for completing this questionnaire. Please mail it together with all seven copies of the DAILY RECORD OF PERSONAL FEELINGS in the postage paid envelope.

Appendix 7

Code # _____

POSTPARTUM QUESTIONNAIRE #2

Now that your baby is about three months old, we would like to have some information about how things are going these days. Please complete this questionnaire just once, any time during the week in which you will be filling out the DAILY RECORD OF PERSONAL FEELINGS of the Personal Feeling Scales for seven consecutive evenings before retiring. Then mail in this questionnaire, together with all seven copies of the DAILY RECORD OF PERSONAL FEELINGS, in the postage paid envelope.

As in the questionnaire you filled out earlier, please do your best to select an answer that is closest to your own, and circle the letter beside it.

1. Which best expresses your evaluation of motherhood these days? Would you say it was...

   a - an exceptionally meaningful experience
   b - enjoyable
   c - routine
   d - a chore
   e - an unpleasant period of my life

2. How "difficult" is your baby? That is, is caring for him/her these days easy or difficult?

   a - no trouble at all to care for
   b - fairly easy to care for
   c - manageable to care for
   d - somewhat difficult to care for
   e - extremely difficult to care for

3. How much are you enjoying taking care of your baby these days?

   a - I dislike immensely taking care of the baby
   b - I just tolerate taking care of the baby
   c - I feel neutral about taking care of the baby
   d - I enjoy somewhat taking care of the baby
   e - I very much enjoy taking care of the baby

POSTPARTUM QUESTIONNAIRE #2 -- continued

4. How warm and affectionate are you with your baby, these days?

   a - quite warm and affectionate
   b - somewhat warm and affectionate
   c - not distinctly affectionate or unaffectionate
   d - somewhat cool and unaffectionate
   e - quite cold and unaffectionate

5. According to your best recollection, how do your maternal feelings these days compare with your maternal feelings when the baby was about two weeks old (the last time you filled out a questionnaire for this study)?

   a - I feel a great deal less maternal now
   b - I feel somewhat less maternal now
   c - I feel about the same as before
   d - I feel somewhat more maternal now
   e - I feel a great deal more maternal now

6. Do you have anyone helping you care for the baby (paid employee, husband, relative or friend)?

   a - yes
   b - no

7. If "yes" on question #6, about how many hours of help with the baby do you get per week from all helpers combined?

   a - 1 to 4 hours total per week of help with the baby
   b - 5 to 10 hours total per week of help with the baby
   c - 11 to 20 hours total per week of help with the baby
   d - 21 to 30 hours total per week of help with the baby
   e - 31 to 40 hours total per week of help with the baby
   f - more than 40 hours total per week of help with the baby

8. Are you employed outside of the home (include paid employment and volunteer employment)?

   a - yes
   b - no

POSTPARTUM QUESTIONNAIRE #2 -- continued

9. If "yes" on question #8, how many hours total per week (paid and volunteer employment) are you employed outside of the home?

   a - 1 to 4 hours total per week
   b - 5 to 10 hours total per week
   c - 11 to 20 hours total per week
   d - 21 to 30 hours total per week
   e - 31 to 40 hours total per week
   f - more than 40 hours total per week

10. Do you have anyone helping you with the housework and/or shopping (paid employee, husband, relative or friend)?

   a - yes
   b - no

11. If "yes" on question #10, about how many hours of help with housework and/or shopping do you get per week from all helpers combined?

   a - 1 to 4 hours total per week of help with house work and/or shopping
   b - 5 to 10 hours total per week of help with house work and/or shopping
   c - 11 to 20 hours total per week of help with house work and/or shopping
   d - 21 to 30 hours total per week of help with house work and/or shopping
   e - 31 to 40 hours total per week of help with house work and/or shopping
   f - more than 40 hours total per week of help with house work and/or shopping

12. Does your baby require a middle-of-the-night feeding or feedings?

   a - yes
   b - no

13. If "yes" on question #12, who gives your baby the night feeding or feedings?

   a - sometimes I do, and sometimes baby's father or other helper
   b - never myself (baby's father or other helper feeds during the night)
   c - always myself, during the night

POSTPARTUM QUESTIONNAIRE #2 -- continued

14. Are you presently breast feeding or bottle feeding your baby?

    a - breast feeding (some breast and some bottle, or breast only)
    b - bottle feeding (no breast given)

IF BREAST FEEDING (SOME BREAST AND SOME BOTTLE, OR BREAST ONLY), PLEASE SKIP TO QUESTION #20, AND THEN CONTINUE TO THE END OF THE QUESTIONNAIRE.

IF BOTTLE FEEDING (NO BREAST GIVEN), PLEASE ANSWER QUESTIONS #15 THROUGH AND INCLUDING #19. THEN SKIP TO QUESTION #27 AND CONTINUE TO THE END OF THE QUESTIONNAIRE.

15. How many bottle feedings per day does your baby take at this time?

    a - fewer than three
    b - three or four
    c - five or six
    d - more than six

16. Is any food other than formula given?

    a - yes
    b - no

17. If "yes" on question #16, please circle all that apply:

    a - juice
    b - sugar water
    c - baby food, cereal, or other "solids"
    d - other (please specify) _____

18. About how long does a bottle feeding usually take (count sucking time only, not time out for changing diaper)? If feedings vary, choose an average time.

    a - 5 to 10 minutes
    b - 11 to 20 minutes
    c - 21 to 30 minutes
    d - 31 to 40 minutes
    e - more than 40 minutes

POSTPARTUM QUESTIONNAIRE #2 -- continued

19. Have you had a menstrual period since the birth of your baby?

a - yes, a full menstrual period
b - yes, but only a brief one (less than usual)
c - no, I have not had any menstrual period

IF BOTTLE FEEDING, PLEASE SKIP TO QUESTION #27, AND CONTINUE TO THE END OF THE QUESTIONNAIRE.

IF BREAST FEEDING (SOME BREAST AND SOME BOTTLE, OR BREAST ONLY), PLEASE COMPLETE QUESTIONS #20 THROUGH AND INCLUDING #34 (TO THE END OF THE QUESTIONNAIRE).

20. On the average, how many bottles of supplementary formula are given per week?

a - one to three bottles per week
b - four to six bottles per week
c - seven or more bottles per week
d - no supplementary formula is given

21. Is your baby ever given your breast milk in a bottle?

a - yes
b - no

22. If "yes" on question #21, how often is this done?

a - one to three times per week
b - four to six times per week
c - seven or more times per week

23. Is any food other than breast milk or formula given?

a - yes
b - no

24. If "yes" on question #23, please circle all that apply:

a - juice
b - sugar water
c - baby food, cereal, or other "solids"
d - other (please specify) _____

POSTPARTUM QUESTIONNAIRE #2 -- continued

25. About how long does a breast feeding usually take (count sucking time only, not time out for changing diaper)? If feedings vary, choose an average time.

    a - 5 to 10 minutes
    b - 11 to 20 minutes
    c - 21 to 30 minutes
    d - 31 to 40 minutes
    e - more than 40 minutes

26. Have you had a full menstrual period since the birth of your baby?

    a - yes, a full menstrual period
    b - yes, but only a brief one
    c - no, I have not had any menstrual period

IF BREAST FEEDING OR BOTTLE FEEDING, PLEASE CONTINUE HERE:

27. Have you resumed having sexual relations since the birth of your baby?

    a - yes
    b - no

IF "YES" ON QUESTION #27, PLEASE ANSWER QUESTIONS #28 THROUGH AND INCLUDING #34.

IF "NO" ON QUESTION #27, PLEASE SKIP DIRECTLY TO QUESTION #34.

28. How does your sexual desire at the present time compare with your desire before pregnancy?

    a - much less than before pregnancy
    b - somewhat less than before pregnancy
    c - the same as before pregnancy
    d - somewhat greater than before pregnancy
    e - much greater than before pregnancy

POSTPARTUM QUESTIONNAIRE #2 -- continued

29. Are you presently experiencing any discomfort during intercourse?

    a - no discomfort at all
    b - hardly any discomfort
    c - a fair amount of discomfort
    d - quite a bit of discomfort

30. Are you presently experiencing any difficulties with vaginal dryness (lack of lubrication) during intercourse?

    a - considerable problem with vaginal dryness
    b - somewhat of a problem with vaginal dryness
    c - hardly any problem with vaginal dryness
    d - no problem at all with vaginal dryness

31. If you have reported any temporary difficulties with sexual relations in questions #28 through #30 (that is, decreased desire, discomfort, and/or lack of vaginal lubrication), are you experiencing any concerns about this?

    a - I am quite concerned
    b - I am somewhat concerned
    c - I am hardly concerned at all
    d - I am not in the least concerned

32. If you have reported any temporary difficulties with sexual relations in questions #28 through #30, is your husband experiencing any concerns about this?

    a - he is quite concerned
    b - he is somewhat concerned
    c - he is hardly concerned at all
    d - he is not in the least concerned

33. Please use this space if you wish to give more specific information about how things are going with the resumption of your sexual relations:

POSTPARTUM QUESTIONNAIRE #2 -- continued

ALL RESPONDENTS PLEASE RESUME HERE:

34. Please use this space to add any information you would like to contribute, and/or any comments you may have about this questionnaire:

Thank you for completing this questionnaire. Please mail it together with all seven copies of the DAILY RECORD OF PERSONAL FEELINGS in the postage paid envelope.

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